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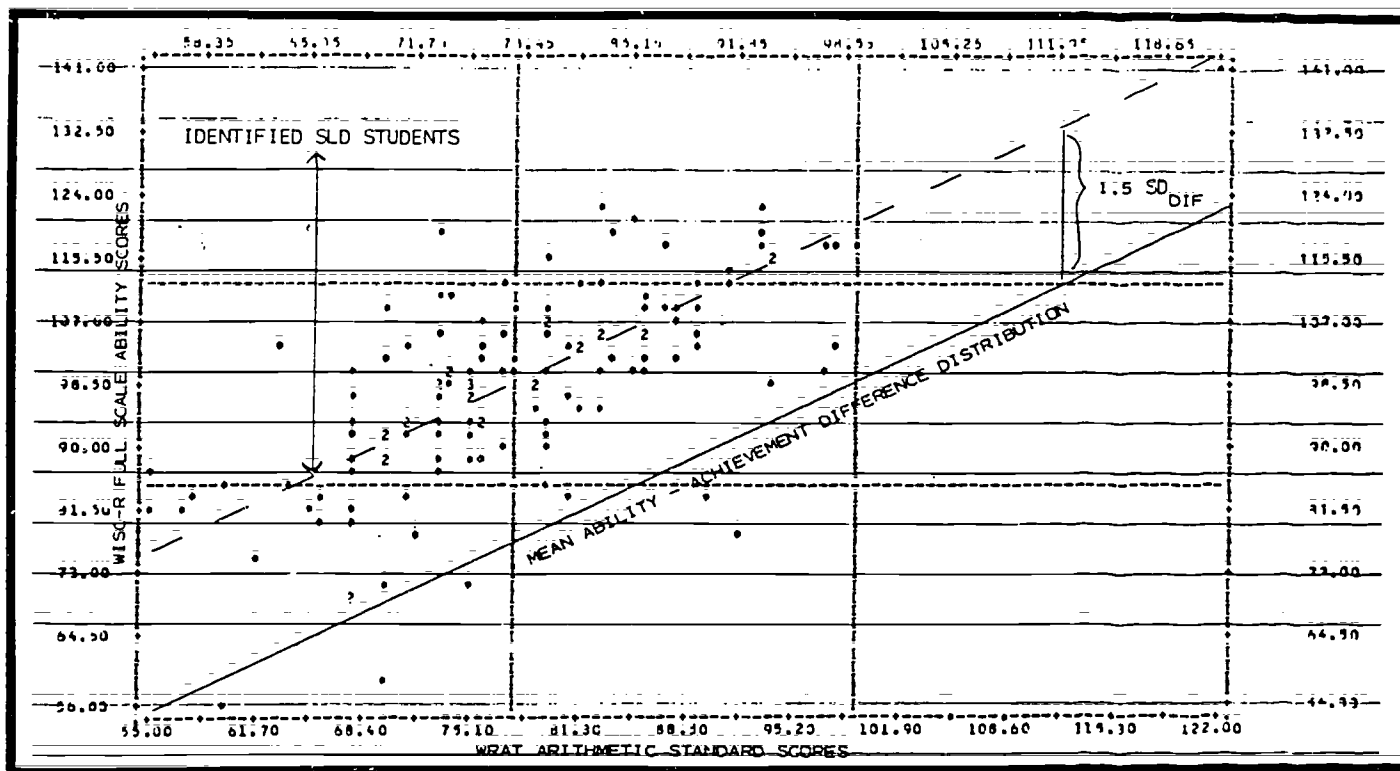
ABSTRACT

During the spring of 1981, a San Juan Task force of special education staff members developed revised criteria for the identification of students with specific learning disabilities (SLD). This report covers the second year of discrepancy criteria implementation. It examines the identification of 225 students with SLD during the first semester of the 1982-83 school year in the San Juan (California) Unified School District. Of particular interest was the impact of the California criteria for identification, adopted in early 1983. The criteria in use in San Juan for the 1981-83 period were similar to those adopted by the state, but were applied according to a uniform discrepancy score, rather than using a different discrepancy for each pair of test scores. Students identified under San Juan's criteria were found to be in line with the adopted state criteria specifications. (Attachments are included for the state and federal legislation related to SLD, and San Juan's criteria for services.) The use of discrepancy criteria had no effect on the percent of referrals identified. It did, however, have an effect on the number of students referred for special education. Because fewer students were referred, fewer students were actually identified as having learning disabilities. (PN)

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SPECIFIC LEARNING DISABILITY

1982-83 STUDY



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The frontispiece is a correlational
scatterplot showing ability and arithmetic scores
for referred SLD students.
See page 14 for further discussion.

EXECUTIVE SUMMARY

This report examines the identification of 225 students with specific learning disabilities (SLD) during the first semester of the 1982-83 school year in the San Juan Unified School District. Of particular interest was the impact of the California criteria for identification, adopted in early 1983. The criteria in use in San Juan for the period 1981-1983 were similar to those adopted by the State, but were applied according to a uniform discrepancy score, rather than using a different discrepancy for each pair of test scores. Of major concern, then, was the analysis of any differences in identification rates which would be found when the State criteria are implemented in the Fall of 1983.

These are some of the study findings:

- . Students have been properly identified, with evidence of interventions prior to referral, and with evidence of substantial deficiencies in academic achievement due to psychological processing handicaps.
- . The students identified as having specific learning disabilities (SLD) have normal ability for learning.
- . The greatest number of SLD students have substantial deficiencies in math, with reading deficiencies the next most frequent.
- . Identified SLD students have one or more psychological processing disorders, with the majority having difficulty in the cognitive area.
- . Three-fourths of the students with SLD are identified during the elementary grades, during the time when corrective interventions are most effective.
- . Student SLD identifications declined by 25 percent since 1981 due to the use of the new criteria in San Juan.
- . Using only full scale ability test scores restricts the number of students qualifying as SLD by about 20 percent; using verbal or performance scores, when higher than full scale, increases the number of students by 10 and 20 percent, respectively.
- . Use of the State-specified criterion values for ability-achievement score discrepancies (with consideration of measurement error, as is done at present) will cause only a minimal reduction (about two percent) in San Juan's SLD identifications.

Students identified under San Juan's criteria were found to be in line with the adopted State criteria, and no untoward differences are anticipated with the change to State criteria specifications. There would be a decline in identifications if the criterion values established by the State were applied strictly, with no consideration for psychometric error. Such a procedure would be contrary, however to recommended test reporting procedures.

SPECIFIC LEARNING DISABILITIES 1982-83 ELIGIBILITY STUDY

INTRODUCTION

Study Background

During the Spring of 1981, a San Juan task force of special education staff members developed revised criteria for the identification of students with specific learning disabilities (SLD). The revised criteria were developed to be more compatible with the intent of the Federal criteria for specific learning disabilities (see Attachment A).

Changes in the criteria included (1) defining a severe discrepancy between ability and achievement (rather than low achievement alone), (2) using individually-administered ability tests (rather than assuming that student ability was normal), and (3) requiring evidence of a processing disorder. It was expected that the revised criteria would more appropriately identify students with a "specific learning disability," and that their use would reduce the actual number of new identifications.

Following the first year of implementation of the discrepancy criteria, a report was prepared on the effects of their use. This report is on the second year of discrepancy criteria implementation in San Juan. It includes all of the types of information presented in the first report as well as exploring some of the variables which might affect the application of the California specific learning disability criteria adopted by the State in the Spring of 1983 and specified in the California Administrative Code, Article 3.1, Section 3031(j) (see Attachment A).

Criteria Used

The criteria developed in San Juan for the identification of students with specific learning disabilities, and used during the period 1981-1983, are presented in Attachment B.

Comparison with State Criteria Developed in 1982 and Adopted in 1983

In the process of developing San Juan's revised criteria, the task force considered a number of statistical methods related to specifying a discrepancy. Among these were statistical significance, the reliability of difference scores, and standard deviations of difference scores. The later method was used to establish the generalized approach adopted for use in San Juan. San Juan's criteria used during the period 1981-1983 differ from the state criteria in their application, as a consistent standard score difference was selected for use in San Juan. This uniform or consistent score difference was based upon the median ability-achievement test correlation for the tests most frequently used in San Juan.

The difference score used in San Juan was equal to 1.5 standard deviations, or 22 common standard score points. This discrepancy is similar to the State-specified 1.5 standard deviations of the difference score distribution, but it does not vary when different tests are used. The effects of applying the State-specified standard deviation of the difference score distribution formula are discussed in a later section of this report.

Study Purpose/Questions

The following questions were covered in the 1981-82 eligibility study report, and are reported in this study, with comparisons between the two years.

- What tests are used to measure academic achievement and with what results?
- What ability range is found in identified students?
- In what academic areas are students identified?
- What is the distribution of students with single or multiple academic deficiencies?
- What amount of ability-achievement discrepancy is found?
- What are the psychological processing disorders?
- What is the distribution, by grade levels, of identified specific learning disability students?
- How do principals view the SLD criteria?

In addition to the questions above, this report also answers these questions:

- How does the use of subtest scores on ability tests compare with the use of total ability scores for student eligibility?
- How does the use of consistent standard score differences compare with the use of the standard deviation of the difference scores?
- How are the discrepancy criteria viewed by school psychologists?
- How does the number of new student placements compare with the prior years?

STUDY DESIGN

Information Requirements

To produce a report answering the above questions, several types of information were required. One type of information was related to tests and test scores. Another type of information was that recorded in the students' IEPs related to psychological processing disorders, evidence of prior interventions and specification of no other contributing factor. The last type of information was principals' and psychologists' perceptions regarding use of the criteria.

Student identification--The first step in gathering student information was to identify those students who were new placements during the first semester of the 1982-83 school year, with specific learning disability identified as the handicap. This was done through a management information system search.

IEP records--Second, the IEP form with the recorded achievement test information and the specification of eligibility was pulled for each of these students, and a copy was made.

Confidential records--Third, the record of psychological testing was consulted for the total and part ability scores of each identified student (this information is usually not included in the IEP write-up, but is maintained in a separate, confidential file).

Interviews--Fourth, interviews were held with one-fourth (eighteen) of the district principals. Principals at eighteen schools were interviewed as part of the year's evaluation plan. Questions related to the revised criteria, their application and effects were asked during these interviews. The responses were then analyzed to use in this study.

Surveys--Last, school psychologists were asked to complete a survey which included questions about the criteria and their application.

Information Collection, Processing and Analysis

Record sheets were prepared on which student information was entered. Students were given reference numbers to ensure confidentiality. The types of information picked up from the IEP included the identifying achievement test information, grade, birth year, psychological processing deficit, recorded elimination of other disorders and evidence of prior classroom modifications. The total ability test scores (as well as both verbal and performance subtest scores for the WISC-R) were retrieved and added to the IEP information. In this study all scores were reported as common standard scores with a mean of 100 and a standard deviation of 15.

After the information was recorded, 258 student records were key punched and analyzed using the Statistical Package for the Social Sciences (SPSS) through the California State University, Sacramento, computer center.

Study Limitations

This study has two major limitations. First, some students new to San Juan had met different identification requirements in other districts previously. Second, the study only included full information on the first semester identifications.

Identifications From Other Districts--In the process of preparing the student information, it was found that a number of the students who were entering program as "new" students in San Juan, had been enrolled previously in an other district's special education program. Of the 258 students originally identified for the study, 48 or nearly one-fifth had been identified previously by another district. About two-thirds of these 48 students did not have IQ test information readily available for use in this study, although such information may have been available during the placement process. This restriction limited the total number of students reported in the study findings to 225.

First Semester Identifications--Only the students identified during the first semester of the 1982-83 school year were included in the study. By the end of the school year, 598 students had been identified as SLD students. This study then, reports findings for less than half (38 percent) of the year's identifications.

STUDY FINDINGS: PART I
COMPARISONS WITH 1981-82 STUDY

Academic Achievement Tests Used

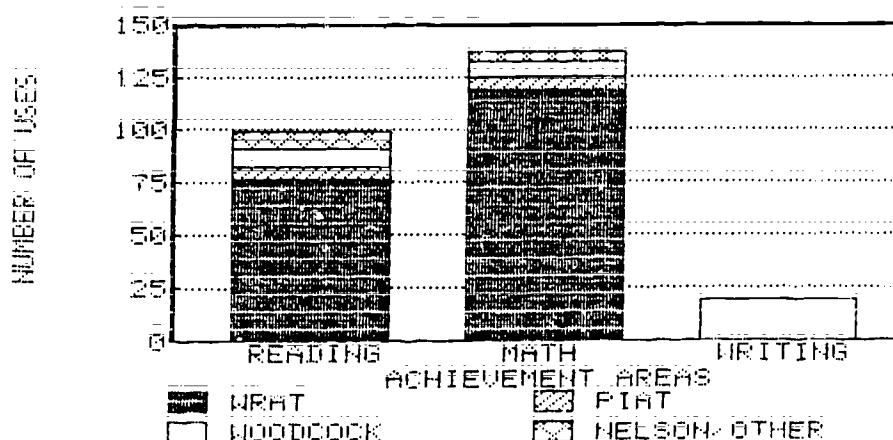
Four standardized achievement tests comprised over 95 percent of the student identifications. The Wide Range Achievement Test (WRAT) was used extensively to identify basic reading and mathematic computation discrepancies. The Woodcock-Johnson Psycho-Educational Battery was used for almost all written language identifications, as well as for other academic areas. The Peabody Individual Achievement Test and the Nelson Reading Tests were used for some reading and/or mathematics identifications. Other tests were used in the identification of only twelve students, and these were mainly for students with discrepancies in oral expression and listening comprehension. The frequency of test use is presented in Table 1 and illustrated in Figure 1.

Table 1
Academic Deficit Areas and Standardized
Achievement Tests Used in the Identification of
225 Specific Learning Disability Students During the
First Semester of the 1982-83 School Year

Academic Deficit Area	STANDARDIZED ACHIEVEMENT TEST					
	WRAT	PIAT	WOODCOCK	NELSON	OTHER	TOTALS
READING	77	6	8	8	1	100
ARITHMETIC	120	6	7	5	2	140
WRITTEN LANGUAGE	0	0	20	0	0	20
ORAL EXPRESSION	0	0	1	0	4	5
LISTENING COMPREHENSION	0	0	0	0	5	5
TOTALS*	197	12	36	13	12	270

*Totals include duplicate counts for 45 students with more than one deficit area.

FIGURE 1. TESTS USED TO IDENTIFY SLD



The test use pattern was very similar to that of 1981-82, with the WRAT used in about two-thirds of the identifications. The use of other tests was also very similar for the two years.

Academic Achievement Test Results

The achievement test scores reported in common standard scores ($M=100$, $SD=15$), ranged from a low of 55 to a high of 99 across all areas, with only one exception: a gifted student with an achievement score of 122. The median achievement scores in reading, written expression or math ranged from 75 to 80. The score ranges and median scores are presented in Table 2. The achievement test results were almost identical to those of the previous year.

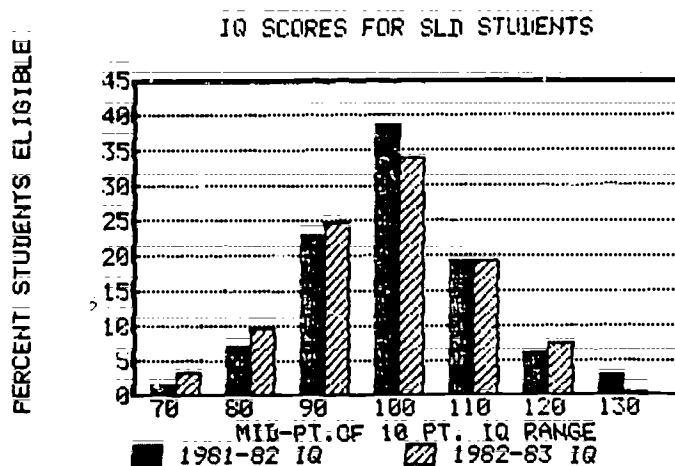
Table 2
Standard Score and Ability-Achievement Discrepancy Score Ranges and Medians
for 225 Students With Identified Specific Learning Disabilities

Ability/Achievement Test Area	Number of Students	Standard Score Range	Median Score	Discrepancy Score Range	Median Score Discrepancy
Ability (Full Scale)	(225)	71 - 141	99		
Reading	(100)	59 - 99	77	18 - 55	27
Math	(140)	55 - 122	76	19 - 53	26
Written Expression	(17)	65 - 94	75	18 - 50	29
Oral Expression	(5)	62 - 84	80	22 - 36	24
Listening Comprehension	(5)	61 - 76	70	21 - 34	32

Ability Test Results

The full scale ability test scores found for the students identified as having specific learning disabilities formed a normal-appearing distribution. Ability test scores ranged from a low of 71 to a high of 141, with a median of 99. For the most part, this ability range corresponds with that of the 96 percent of the population considered to fall within "average" ability levels. The relative percent of eligible students with various ranges of ability scores is shown in Figure 2 for both 1981-2 and 1982-3. No significant differences were found between the ability scores for the two years.

FIGURE 2.



Academic Learning Areas

The academic learning areas which were tested included reading, math, written expression, oral expression and listening comprehension. Reading and math were each listed in the criteria as having two sub-areas, but they were treated as single areas in this study. The area most frequently found as an area of discrepancy was math, followed by reading and written expression. Oral expression was found as a discrepancy area five times, as was listening comprehension. (See Table 1 for a listing of areas and counts.) The only academic area which appeared to differ substantially from the previous year was the apparent decline in the number of students with difficulty in written expression.

Multiple Academic Achievement Areas

While the majority (81 percent) of students with identified specific learning disabilities had a single area of disability, others had two (71 percent) or three (2 percent) areas identified. Across the three basic skills areas, more students had disabilities in math (54 percent) than in reading (38 percent), with relatively few (8 percent) having a writing disability. These data are presented in Table 3.

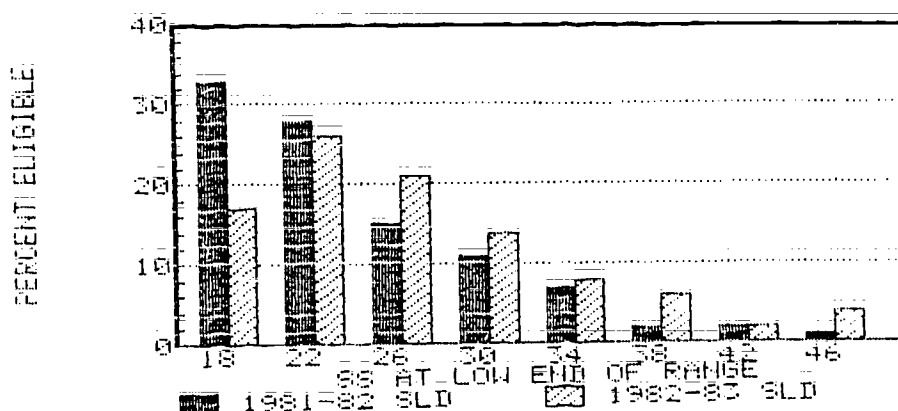
Table 3
 Duplicated and Unduplicated Frequencies
 for 215 Students With One, Two or Three
 Disability Areas in Reading, Math, and Written Expression

Disability Area	Single Area	Two Areas			Three Areas	Students (Duplicated Count)	
		Reading	Math	Writing			
Reading	60	--	31	5	4	100	38%
Math	104	31	--	1	4	140	54%
Written Expression	10	5	1	--	4	20	8%
Unduplicated Totals	174 (81%)	37 (17%)			4 (2%)	215	

Discrepancy Scores

Discrepancy scores were computed by subtracting the achievement score from the ability score. Discrepancy scores had a range of from 18 to 55 points, with medians varying from 24 to 32, depending upon the achievement test area. These discrepancy figures are based upon using the highest ability score of the verbal, performance, or total. Further comparisons between use of part scores and total scores are presented in another section (see page 11). The relative percent of eligible students with varying standard score discrepancy points is shown in Figure 3. The major difference from the 1981-82 year was a decrease in the percent identified with moderate discrepancies from one-third to fewer than one-fifth of the identifications.

FIGURE 3: STANDARD SCORE DISCREPANCY



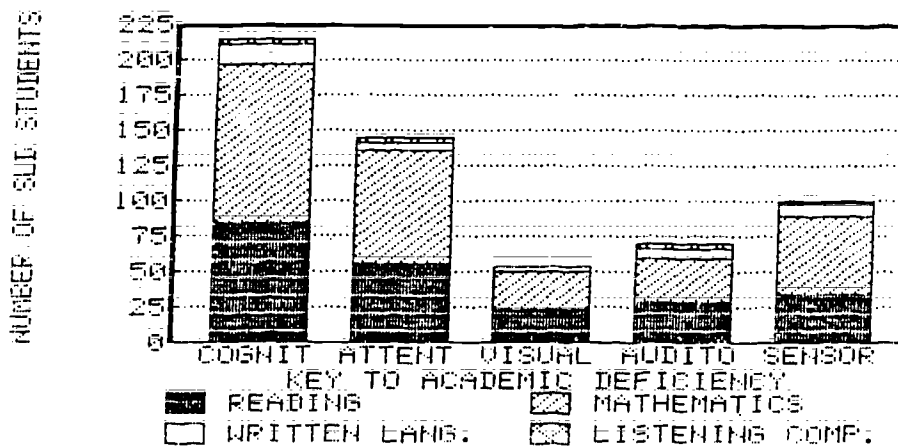
Processing Disorders

Processing difficulties were mentioned in the IEP for every student identified as having a specific learning disability. Many students had difficulties in more than one processing area. The processing disorder areas were termed somewhat differently in this year's study, to bring them in line with the new State criteria. Three areas, cognitive, attention and sensory-motor remained the same, with processing divided into auditory or visual, and with expression being eliminated. Of the five areas specified in the criteria, the cognitive area was mentioned most frequently--for 82 percent of the identified students. This area was followed by attention (specified for 56 percent of the students), and by sensory-motor (named for 37 percent of the students). Auditory and visual processing disorders were mentioned 26 and 20 percent of the time, respectively. The percent of students having each processing disorder identified, organized by academic disability area, is presented in Table 4 and illustrated in Figure 4. These percents differed little from those of the previous year (within five percent), except for sensory-motor disorders which had 20 percent fewer uses this year.

Table 4
Psychological Processing Disorders for Students
With Identified Specific Learning Disabilities
(Multiple Processing Disorders were Frequently Identified)

PSYCHOLOGICAL PROCESSING DISORDERS						
Academic Disability Area	TOTAL NO. STUDENTS	COGNITIVE	ATTENTION	VISUAL PROCESSING	AUDITORY PROCESSING	SENSORY MOTOR
READING	100	84	57	24	29	35
ARITHMETIC WRITTEN LANGUAGE	140	113	79	26	31	56
ORAL EXPRESSION	20	15	6	5	7	8
LISTENING COMPREHENSION	5	5	4	0	0	0
DUPLICATED COUNT	5	4	4	0	3	1
RELATIVE PERCENT	270	221	150	55	70	100
	100%	82%	56%	20%	26%	37%

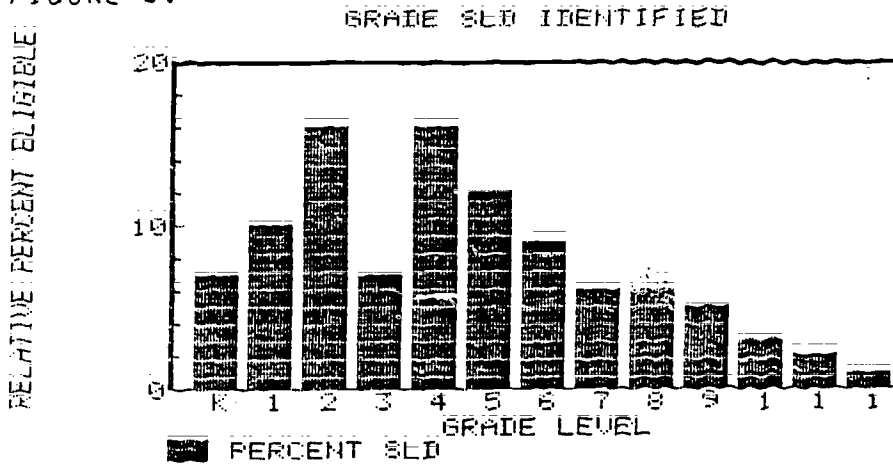
FIGURE 4. PSYCHOLOGICAL DISORDERS



Grade Levels of Identified Students

The pattern of grade levels at which students were referred and identified as having specific learning disabilities formed a positively skewed distribution rather than the "saw-tooth" pattern found last year. One exception was in grade three, which had only half as many identifications, proportionally, this year. More kindergarten and first grade students were identified, also. The elementary grades accounted for 77 percent of the identifications--up from 65 percent a year ago. Fewer students were identified from the intermediate level (12 percent, down from 18 percent) and from the high school level (11 percent, down from 16 percent). These grade level identification figures are shown in Figure 5.

FIGURE 5.



Grade Levels and Academic Area of Deficit

Students having reading and written language problems were most frequently identified from grade one through grade five. In mathematics, most students were identified in second through sixth grade. Listening comprehension and oral expression problems were primarily identified in grade three. Again, the pattern was very similar to that of the previous year. Table 5 and Figure 6 present this information.

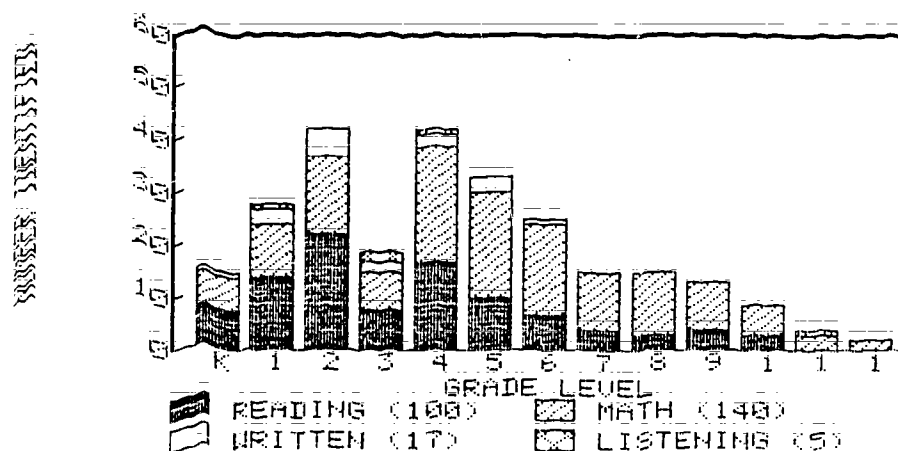
Table 5
Number of Students Identified at Each
Grade Level by Academic Area

	GRADE LEVEL													TOTAL
	K	1	2	3	4	5	6	7	8	9	10	11	12	
READING	8	14	22	8	17	10	7	4	3	4	3	0	0	100
ARITHMETIC	6	10	15	7	22	20	17	11	12	9	6	3	2	140
WRITTEN LANGUAGE	1	3	5	3	4	3	1	-	-	-	-	-	-	20
ORAL EXPRESSION	3	-	2	-	-	-	-	-	-	-	-	-	-	5
LISTENING COMPREHENSION	-	1	-	2	1	-	-	-	-	-	-	1	-	5
NUMBER OF ELIGIBLE STUDENTS	18	28	44	20	44	33	25	15	15	13	9	4	2	270*
PERCENT OF ELIGIBLE STUDENTS	7%	10%	16%	7%	16%	12%	9%	6%	6%	5%	3%	2%	1%	100%

*Duplicated student count including 45 students identified in more than one academic area.

FIGURE 8.

GRADE AND ACADEMIC AREA



Reactions of School Principal to SLD Criteria

Of the eighteen principals at all levels who were questioned about the impact of the SLD criteria revisions, 90 percent found the criteria appropriate for identifying SLD students. Principals mentioned different reasons for their approval; these are some of the statements made:

- The criteria have helped to qualify students with more severe needs.
- We are clearer about use of discrepancy between ability and achievement.
- The criteria allow for a wider spread of students with more needs.
- The students who are qualified are those that seem more appropriate to LD.
- The criteria help us to find students who were missed before.

Some of the effects found by San Juan principals after using the new criteria for one and one-half years included:

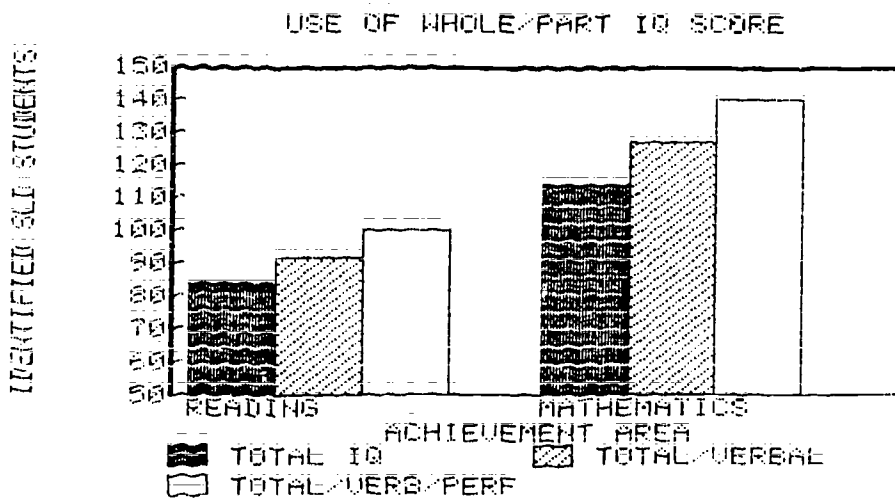
- fewer students were identified;
- students with severe learning problems who used to have to stay in regular classes were identified; and
- some non-identified students with low ability and low achievement still need help, even if not qualified for special education.

STUDY FINDINGS: PART II EFFECTS RELATED TO CALIFORNIA CRITERIA

Effect of Use of Whole or Sub-part Ability Test Scores

The criteria implementation guide adopted in San Juan in 1981 stipulated that the total ability test score was preferred for all identifications except for those cases in which the verbal score was higher than the total score. The guide specified that the performance score, alone, would not be used to calculate the discrepancy. Despite this specification, it was found that some thirty-two students were identified during the year based upon the performance score. The effect of using a total score, the higher of total or verbal, or the highest of total, verbal or performance was examined. In both reading and mathematics, the number of identifications increased by nearly ten percent with each additional score. This effect is shown in the graph presented as Figure 7:

FIGURE 7.



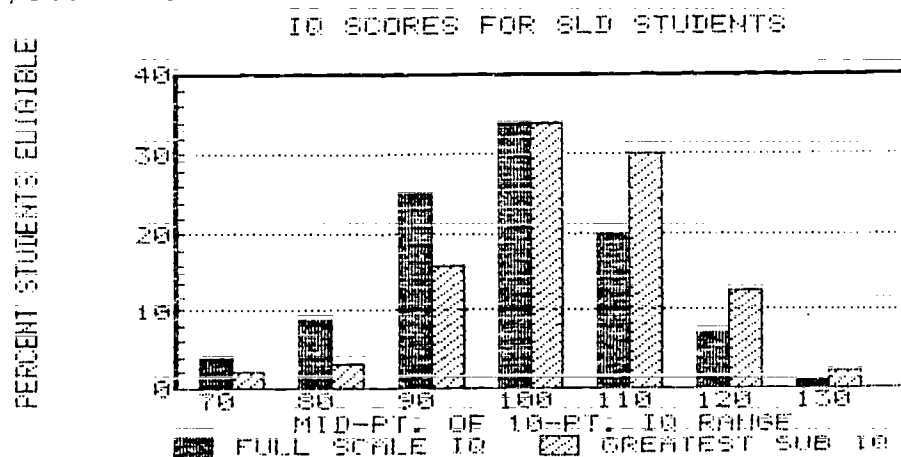
Higher Verbal Ability--There were 84 cases in which students had higher verbal than total ability scores. Half of these students had verbal scores no more than 5 points higher than their total scores, and 80 percent were no more than 10 points higher. In analyzing 1982-83 placements, an additional 21 students (10 percent) qualified for identification when the verbal score was used rather than the total.

Higher Performance Ability--There were 118 cases in which students had higher performance than full scale ability scores. For 43 percent of these students, the performance scores were within 5 points of their full scale scores, and nearly 80 percent (78%) were within 10 points of their full scale scores. Twenty-one percent had performance scores greater than 10 points from their full scale score.

In analyzing the effects of using the performance score rather than the higher of full scale or verbal, an additional 23 students (10 percent) qualified for identification when performance scores were allowed.

Ability Distribution--Total or full scale ability scores form a relatively normal distribution, while using the highest of the part or total scores forms a negatively skewed distribution. This change in the ability distribution is shown in Figure 8:

FIGURE 8:



Relationship Between Ability Scores--Correlations between the ability scores were .46 between the two part scores--verbal and performance. The part scores, however, had high correlations with the full scale score-- .84 for verbal and .85 for performance (see Table 6).

Table 6
Correlations Between Partial and Full Scale
Ability Test Scores

	Performance	Full Scale
WISC-R		
Verbal	.46*	.84*
Performance	-	.85*
Full Scale	-	-

*Significantly correlated, $p < .02$

Effect of Using State-Specified Tables

Based upon the ability-achievement score discrepancy, with no allowance for measurement error, the number of students identified in 1982-83 under the new State criteria would be lower by 28 percent. If one standard error of measurement is allowed, as compensated for in the 1981 San Juan criteria, it appears that only two percent of students would not meet criteria. The application of different criterion values is presented in Table 7.

Table 7
Percent of 1982-83 Identified SLD Students
Meeting Various Criterion Values

Academic Area	Under San Juan Criteria 82-3				Under State Criteria 83-4			
	Without SEM		With SEM		Without SEM		With SEM	
	#	%	#	%	#	%	#	%
Reading (all tests)	85	85%	100	100%	72	72%	95	95%
WRAT	(66)		(77)		(61)		(75)	
PIAT	(6)		(6)		(4)		(6)	
WOODCOCK	(5)		(8)		(5)		(7)	
NELSON	(7)		(8)		(2)		(7)	
OTHER	(1)		(1)		(0)			
Math (all tests)	116	83%	140	100%	100	71%	140	100%
WRAT	(100)		(120)		(66)		(120)	
PIAT	(4)		(6)		(4)		(7)	
WOODCOCK	(6)		(7)		(6)		(7)	
OTHER	(6)		(7)		(4)		(6)	
Written Expression								
WOODCOCK	14	70%	20	100%	14	70%	20	100%
TOTALS	215	83%	260*	100%	186	72%	255	98%

*This number is a duplicate count, including 45 students who qualified in more than one area.

Establishment of Correlations Between Tests

Based upon the use of ability and achievement tests during the past year, it was possible to derive ability-achievement test correlations for some tests and academic areas. These correlations were usually higher than the median correlations selected by the State for use in the tabled criterion values. A comparison of the correlations between the Wide Range Achievement Test (WRAT) for Reading and Arithmetic and the Woodcock-Johnson Psycho-Educational Battery for Written Language and of the common standard score discrepancy required to meet the criterion value is given in Table 8. The criterion values derived from the San Juan correlations differed from those in the State tables by 1 to 5 standard score points, with only one of the nine test pairs requiring a greater criterion value.

Table 8
Comparison of State and San Juan
Correlation and Criterion Values for
WISC-R and Achievement Tests

Achievement Test	(N)	Correlations with WISC-R						Criterion Values (Standard Score Discrepancy) with WISC-R					
		Total		Verbal		Performance		Total		Verbal		Performance	
		State	SJUSD	State	SJUSD	State	SJUSD	State	SJUSD	State	SJUSD	State	SJUSD
WRAT - R	(96)	.49	.55	.51	.48	.35	.43	23	21	22	23	26	24
WRAT - M	(142)	.49	.68	.51	.61	.40	.54	23	18	22	20	25	22
WOODCOCK/JOHNSON-R		.46		.49		.29		23		23		27	
WOODCOCK/JOHNSON-WL	(20)	.46	.62	.48	.65	.30	.54	23	22	23	19	27	22
WOODCOCK/JOHNSON-M		.52		.58		.39		22		21		25	
PIAT - RR		.45		.49		.29		24		23		27	
PIAT - RC		.47		.52		.38		23		22		25	
PIAT - M		.58		.57		.39		21		21		25	

These test correlations, however, are based solely upon testing results from a population which has met criteria for specific learning disabilities. These students, while representing a fairly normal population in terms of the distribution of ability test scores, do not represent a normal population in terms of the distribution of achievement test scores. It is believed that this population difference would cause the test correlations to be higher. The relationship between the ability and achievement tests is further illustrated by the scattergram presented in Figure 9. Only students whose ability-arithmetic differences fall above the broken diagonal line qualify as SLD when scores from these two tests (WISC-R Full Scale and WRAT Arithmetic) are compared.

Effect of Allowance for Standard Error of Measurement

The question of how to recognize and provide for measurement error has not been addressed by the State. Common psychometric practice, however, includes the use of confidence bands of interpretation with any score. The allowance for standard error of measurement associated with the difference score distribution was described in the San Juan SLD Criteria Guide used 1981-83, as follows:

To determine a severe discrepancy (1.5 S.D.), there should be 22 points difference between ability and achievement using a standard score scale with a mean of 100 and a standard deviation of 15. To allow for measurement error, however, the following discrepancy guide should be applied:

Discrepancy

22 or more points	Severe discrepancy; student qualifies.
18 to 21 points	Significant discrepancy; requires strong supportive evidence and unanimous team identification.

During 1981-82, the first year San Juan implemented revised SLD criteria, one-third of the students identified had minimal qualifying discrepancies. Fully 33 percent of all identifications were identified under the allowance for measurement error of four standard score points.

Although this measurement error allowance was continued during 1982-83, staff were advised to exert more discretion in placing students who had less than the specified 22 point discrepancy. In the 1982-83 school year, the number of identified students in the error range decreased by nearly half, with only 17 percent of the identifications for students with less than a 22 point discrepancy. Figure 3 (presented on page 7) illustrates this change in identification score discrepancies due to more judicious use of the standard error of measurement.

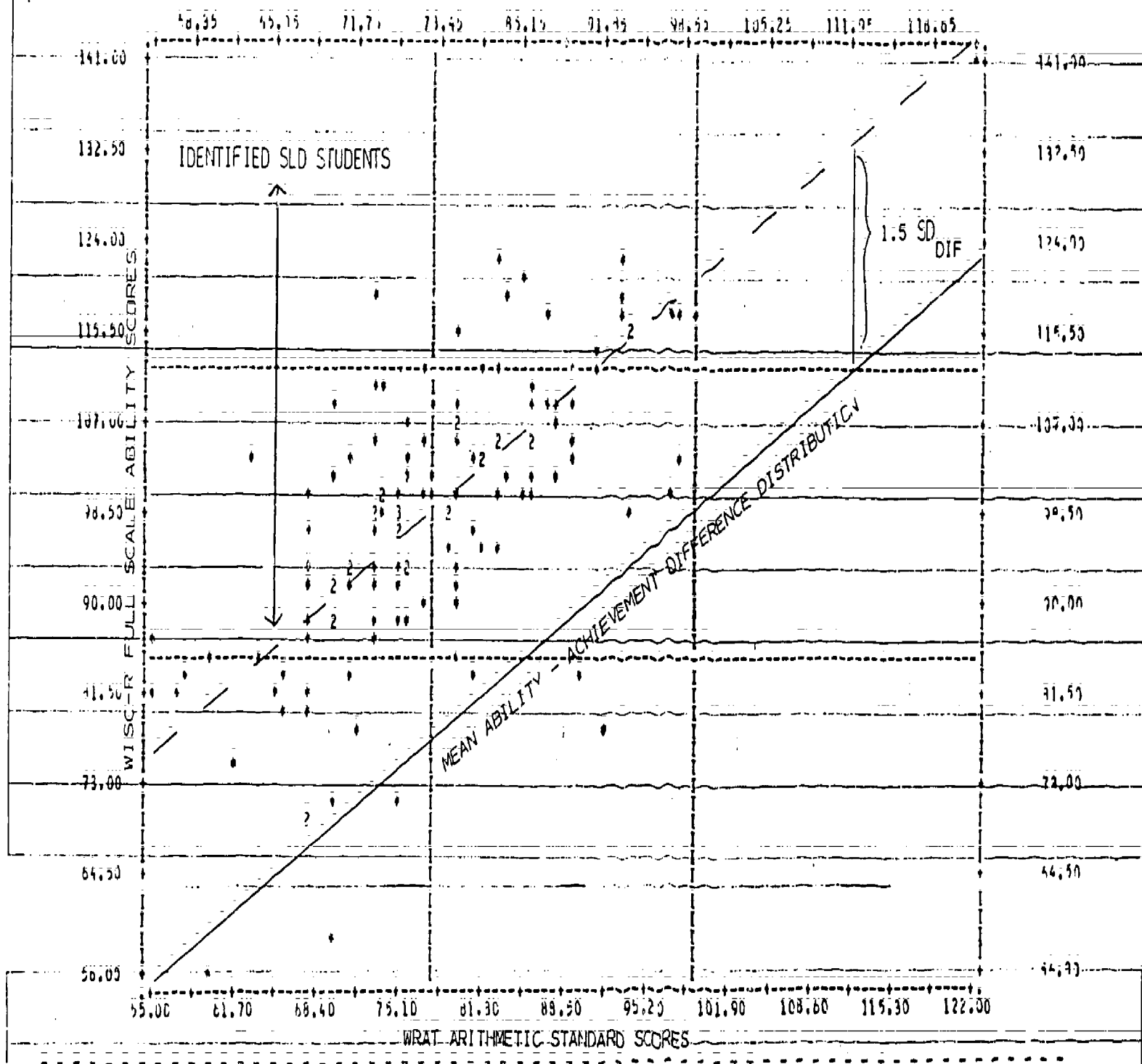


FIGURE 9. Correlational scatterplot showing ability (WISC-R, Full Scale) and achievement (WRAT arithmetic) scores expressed as common standard scores for referred SLD students (many students had achievement disabilities measured by other tests in other academic areas).

Reactions of School Psychologists to SLD Criteria

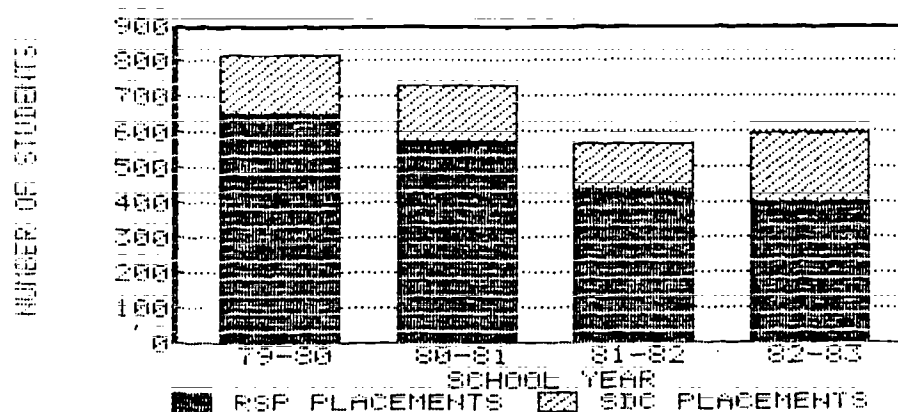
A survey during the Spring of 1983 revealed that the majority of psychologists (18 of the 20) using San Juan's criteria to identify students with specific learning disabilities believed that the criteria were appropriate. Several (15 percent) believed that the criteria tended to "over-identify", and one believed that the criteria "under-identify." Nearly all (90 percent) found that their diagnosis of a basic psychological processing disorder was confirmed by others on the IEP team.

Student Placements

Information on SLD student placements was gathered for the entire 1982-83 year. Of the total of 598 SLD identifications during the school year, 400 or two-thirds were placed in the Resource Specialist Program. The remaining 198 or one-third were placed in Special Day Classes.

In comparison with the previous year, slightly more students were placed in Special Day Classes. During 1981-82, 440 of 570 newly-identified SLD students or more than three-fourths were placed in RSP, with slightly less than one-fourth (23 percent) placed in SDC. This change in SLD placements is shown in Figure 10.

FIGURE 10. SLD IDENTIFICATIONS



Student Identifications

During the past four years, it was found that the implementation of new criteria in 1981 for SLD decreased the number of referrals, the number of identified SLD students, and the number of placements in RSP. Averaging the two years before implementation with the two years following new criteria implementation revealed a decline in identifications of 25 percent. There was a corresponding decline in RSP placements of nearly one-third (32 percent). These year-to-year changes are presented in Figure 10 above. The decrease in SLD identifications produced a change in total special education enrollment from 10.6 percent in January, 1981 to 9.9 percent in December, 1982, nearly two years later.

SUMMARY OF FINDINGS

Effect--The use of discrepancy criteria during both 1981-82 and 1982-83 had no effect on the percent of referrals identified. It did, however, have an effect on the number of students referred for special education. Because fewer students were referred, fewer students were actually identified as having learning disabilities. The decrease in SLD identifications noted in both 1981-82 and 1982-83, and attributable to the discrepancy criteria, was 25 percent less than the number of identifications in 1979-80 and 1980-81. This decrease amounted to a 10 percent reduction in special education students--or about 1 percent of the total school population.

Principals and psychologists noted a change in the type of student eligible for special education service, from only low achieving students to students who had more "specific" learning problems.

Ability--The criteria permitted the identification within a broad range of ability, yet the typical student was of "average" ability.

Application--The criteria were used successfully with students referred for service during the 1981-83 school years. The IEPs documented that the identifications were not only based upon the ability-achievement discrepancy but that they took into account the type of psychological processing disorder which might be responsible for that discrepancy. Furthermore, the IEPs documented that the IEP team had considered and ruled out other causes for the discrepancy, and that modifications in the regular program had been unsuccessful in helping the student.

Attachment A

This attachment presents state and federal legislation related to Specific Learning Disability. The California Administrative Code section, adopted in March of 1983, appears in the center column with information from the California Education Code in the left-hand column and from the Code of Federal Regulations in the right-hand column.

General Topic	Education Code	California Administrative Code	Code of Federal Regulations
Specific learning disability	<p>56337 A pupil shall be assessed as having a specific learning disability which makes him or her eligible for special education and related services when it is determined that all of the following exist:</p> <p>(a) A severe discrepancy exists between the intellectual ability and achievements in one or more of the following academic areas:</p> <ol style="list-style-type: none"> (1) Oral expression. (2) Listening comprehension. (3) Written expression. (4) Basic reading skills. (5) Reading comprehension. (6) Mathematics calculation. (7) Mathematics reasoning. <p>(b) The discrepancy is due to a disorder in one or more of the basic psychological processes and is not the result of environmental, cultural, or economic disadvantages.</p> <p>(c) The discrepancy cannot be corrected through other regular or categorical services offered within the regular instructional program.</p> <p>56338 As used in Section 56337, "specific learning disability" includes, but is not limited to, disability within the function of vision which results in visual perceptual or visual motor dysfunction.</p>	<p>(j) A pupil has a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an impaired ability to listen; think; speak; read; write, spell, or do mathematical calculations, and has a severe discrepancy between intellectual ability and achievement in one or more of the academic areas specified in Sections 56337(a) of the Education Code. For the purpose of Section 3030(j):</p> <ol style="list-style-type: none"> (1) Basic psychological processes include attention; visual processing; auditory processing; sensory-motor skills; cognitive abilities including association, conceptualization and expression. (2) Intellectual ability includes both acquired learning and learning potential and shall be determined by a systematic assessment of intellectual functioning. (3) The level of achievement includes the pupil's level of competence in materials and subject matter explicitly taught in school and shall be measured by standardized achievement tests. (4) When standardized tests are considered to be valid for a specific pupil, a severe discrepancy shall be determined by: first; converting into common standard scores the achievement test score and the ability test score to be compared, second; computing the difference between these common standard scores; and third; comparing this 	<p>541 Criteria for determining the existence of a specific learning disability:</p> <p>(a) A team may determine that a child has a specific learning disability if:</p> <ol style="list-style-type: none"> (1) The child does not achieve commensurate with his or her age and ability levels in one or more of the areas listed in paragraph (a)(2) of this section when provided with learning experiences appropriate for the child's age and ability levels; and (2) The team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas: <ol style="list-style-type: none"> (i) Oral expression; (ii) Listening comprehension; (iii) Written expression; (iv) Basic reading skill; (v) Reading comprehension; (vi) Mathematics calculation; or (vii) Mathematics reasoning. <p>(b) The team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of:</p> <ol style="list-style-type: none"> (1) A visual, hearing, or motor handicap; (2) Mental retardation; (3) Emotional disturbance; or (4) Environmental, cultural or economic disadvantage. <p>(See also p. 16, (9))</p>

General Topic	Education Code	California Administrative Code	Code of Federal Regulations
Specific learning disability (cont.)		<p>computed difference to the product of 1.5 multiplied by the standard deviation of the distribution of computed differences of students taking these achievement and ability tests. A computed difference which equals or exceeds the product of 1.5 multiplied by the standard deviation of this distribution of computed differences indicates a severe discrepancy when such discrepancy is corroborated by other assessment data which may include other tests, scales, instruments, observations and work samples, as appropriate.</p> <p>(5) When standardized tests are considered to be invalid for a specific pupil, the discrepancy shall be measured by alternative means as specified on the assessment plan.</p> <p>(6) The discrepancy shall not be primarily the result of limited school experience or poor school attendance.</p>	

Attachment B

The following information is taken from the Criteria Handbook for Special Education Services used between 1981 and 1983 by the San Juan Unified School District, Department of Special Education. (These criteria were revised in August, 1983, to correspond with the current State criteria.)

CRITERIA FOR SERVICES: SPECIFIC LEARNING DISABILITY

The area level Individualized Education Program (IEP) team may determine that a student has a specific learning disability when all of the following criteria have been met:

- A. The student has a severe discrepancy between achievement and intellectual ability in one or more of the following areas. A severe discrepancy is defined as at least 1.5 standard deviations using standardized tests of achievement and ability.
 - 1. Basic Reading Skill
 - 2. Reading Comprehension
 - 3. Mathematics Reasoning
 - 4. Mathematics Calculation
 - 5. Oral Expression
 - 6. Listening Comprehension
 - 7. Written Expression
- B. The discrepancy is due to a disorder in one or more of the basic psychological processes:
 - 1. Cognition (thinking, attention, problem solving, concept formation)
 - 2. Expression
 - 3. Perception (auditory, visual or haptic processing)
 - 4. Sensory Motor (fine or large muscle)
 - 5. Memory (auditory, visual, haptic)
- C. The IEP team may not identify a student as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of:
 - 1. A visual, hearing, or motor handicap
 - 2. Mental Retardation
 - 3. Emotional Disturbance
 - 4. Environmental, cultural or economic disadvantage.
- D. The discrepancy cannot be corrected through other regular or categorical services offered within the regular instructional program.

Identification Procedures

Individual testing in areas 1, 2, 3, and 4 must be done with standardized tests for which standard scores can be determined, such as the Wide Range Achievement Test and the Peabody Individual Achievement Test.

In areas 5 and 6 (oral expression and listening comprehension) mental age discrepancies between ability and achievement equivalent to 1.5 standard deviations may be determined by language tests such as the Test of Language Development (TOLD) or the Peabody Picture Vocabulary Test, or Utah Test for Language Development.

In area 7, written expression, the discrepancy between ability and achievement equivalent to 1.5 standard deviations may be determined by the total written language score on the Woodcock-Johnson, discrepancies on both the spelling and language usage sections of the Iowa Tests of Basic Skills, or by other standardized tests of written expression approved by the special education department.

The required observation of the student's academic performance in the regular classroom setting (by a member of the assessment team other than the student's regular teacher) supports the measured academic achievement.

Program Placement

A. Resource Specialist Program

Students who require special education and related services for less than the majority of the school day will be placed in the Resource Specialist Program.

B. Special Class Placement

Students who require special education and related services for more than the majority of the school day will be considered for placement in a Special Class. Maximum interaction with the general school population shall be provided in a manner which is appropriate to the needs of both.

